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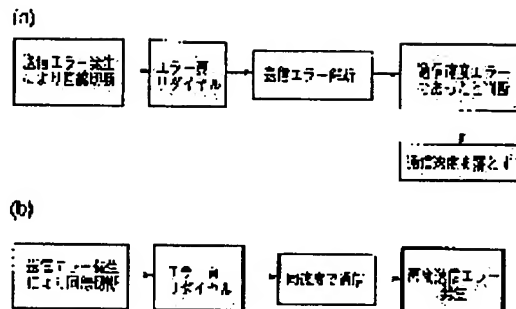
## (54) COMMUNICATION CONTROL UNIT AND FACSIMILE EQUIPMENT

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a communication control unit capable of avoiding a communication error by setting an optimal communication velocity or modulation system to equipment on the opposite side when transmitting an original.

**SOLUTION:** Concerning this communication control unit, when a line is disconnected because of transmitting error occurrence, the redial of an error page, where a transmitting error occurs, is performed.

When it is judged by a means for analyzing the cause of the transmitting error that the cause of the transmitting error exists in the communication velocity or modulation system, the communication velocity or modulation system at the time of retransmission is set to be not higher than the communication velocity at the time of error occurrence by a means for setting the communication velocity at the time of transmission.



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## CLAIMS

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[Claim(s)]

[Claim 1] In the communication controller which will broadcast an error page again if the disconnection which makes a transmitting error to a cause arises It has a means to analyze the cause of a transmitting error, and a means to set up the transmission speed at the time of transmission. A means to set up the transmission speed at the time of said transmission when a means to analyze the cause of said transmitting error judges that the cause of a transmitting error is related to transmission speed is a communication controller characterized by setting the transmission speed at the time of resending below to the transmission speed at the time of error generating.

[Claim 2] A means to set up said transmission speed is a communication controller according to claim 1 characterized by the ability to set up two or more rates.

[Claim 3] The communication controller according to claim 1 or 2 characterized by having a means to associate and memorize the cause of a transmitting error, and the phase hand information which the transmitting error generated.

[Claim 4] The communication controller according to claim 3 characterized by transmitting below with the transmission speed at the time of transmitting error generating when transmitting to the phase hand whom the transmitting error which considers transmission speed as a cause generated in the past.

[Claim 5] A means to detect transmitting agency information, and a means to analyze the cause of a reception error, A means to set up the transmission speed at the time of reception, and a means to analyze the cause of said reception error It has a means to associate and memorize the receiving error code at that time, and a phase hand's transmitting agency information when it is judged that the cause of a reception error is related to the transmission speed at the time of reception. A means to set the transmission speed at the time of said reception to information reception from the behind same phase hand is a communication controller characterized by setting the transmission speed at the time of reception below to the transmission speed at the time of error generating.

[Claim 6] The communication controller according to claim 5 characterized by using Caller ID as said transmitting former information.

[Claim 7] A means to set up said transmission speed is a communication controller according to claim 5 characterized by the ability to set up two or more rates.

[Claim 8] A means to be the facsimile apparatus to which the external telephone which has the function which detects an automatic-answering function and Caller ID was connected, and to detect Caller ID, Detected Caller ID It has a means by which a phase hand's transmitter kind can be judged. after said external telephone carries out a primary response, a means to detect said Caller ID When a phase hand's Caller ID is detected, it is said detected Caller ID. A means by which a phase hand's transmitter kind can be judged Facsimile apparatus characterized by changing CML (Connect Modem to Line) and carrying out facsimile reception when it is judged that a phase hand's transmitter kind is facsimile.

[Claim 9] Facsimile apparatus according to claim 8 characterized by having a means to memorize the information on the transmitter kind corresponding to Caller ID and it.

[Claim 10] It is the facsimile apparatus according to claim 9 characterized by having a means to set up the information on Caller ID and the corresponding transmitter kind for every Caller ID, and performing decision of a model based on the setting-out information.

[Claim 11] It is the facsimile apparatus according to claim 9 characterized by having a means to detect CNG at the time of reception, and a means to memorize the detection result corresponding to Caller ID, and making a judgment of a model based on the existence of said CNG detection.

[Claim 12] Facsimile apparatus characterized by reducing the image information of a two or more pages manuscript to the size for 1 page, and carrying out a report output in the facsimile apparatus which can carry out the report output of the transmitting result information when a transmitting manuscript continues for two or more pages.

[Claim 13] Facsimile apparatus according to claim 11 characterized by having a means to carry out scaling of the image information of the read manuscript, and to memorize it.

[Claim 14] Facsimile apparatus characterized by having the means which carries out synthetic division of the image information of the memorized manuscript in facsimile apparatus according to claim 12.

[Claim 15] The control unit which performs input of the telephone number of the phase hand at the time of transmission, mode setting of a transmitting image, etc., The conveyance scanner section read while conveying a transmitting manuscript, and the storage section which memorizes the image information of a manuscript, In the facsimile apparatus which has the modem and the communications control section which \*\*\*\*\*, transmit and receive the image information of a manuscript, and the print section which outputs the image information memorized by said storage section Facsimile apparatus characterized by checking what the image information of a manuscript memorized for by said storage section while checking that the transmitting manuscript had passed said conveyance scanner section with the output from said print section.

[Claim 16] Facsimile apparatus according to claim 15 characterized by adding the information on user requests, such as a watermark, to the image information memorized by said storage section, and carrying out a printed output to it.

## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to a communication controller and facsimile apparatus.

[0002]

[Description of the Prior Art] When the disconnection which makes a transmitting error to a cause arose in facsimile apparatus equipped with the conventional communication controller, it was what is redialed in order to transmit the manuscript which was not able to be again transmitted on the same communication link conditions. Therefore, even when the transmitting error which considers transmission speed at the time of transmission as a cause arose, what solves the cause of a transmitting error was not performed, but resending was only tried at the same communication link conditions as the time of producing a transmitting error, and a transmitting error was not solved at all, but it was [ that the same transmitting error is only repeated and ].

[0003] In order to solve such nonconformity, in the former, there was an approach using a means to make a high-speed communication link into an invalid, but since this made it into a low speed to transmission to the other party whom a transmitting error does not generate even if it is a high-speed communication link since it changes to a low-speed communication link uniformly, there was [ a problem of degrading communication link effectiveness ].

[0004] On the other hand, also when the disconnection which makes a reception error to a cause arose, it was that by which reception is resumed on the same conditions as reception error generating before from the place where the reception error occurred. Therefore, since resumption of reception was only tried with the same transmission speed as the time of producing a reception error even if it was the case where a reception error considered transmission speed as a cause, it was not canceled but the reception error was [ that the same reception error is only repeated and ].

[0005] Although there was an approach using a means to make a high-speed communication link into an invalid, by the former also to this, even if it is a high-speed communication link, in order to deal with it uniformly like the time of transmission too to the reception from the other party whom a reception error does not generate, there was a problem of making communication link effectiveness deteriorate.

[0006] Moreover, conventionally, in the facsimile apparatus to which the external telephone which has an automatic-answering function was connected, even when the communication link from the other party is facsimile transmission, it receives by external telephone previously and normal facsimile reception cannot be performed. On the other hand, also when the communication link from a phase hand was a telephone, FAKURIMIRI might answer.

[0007] Thus, it was what the change of the telephone/facsimile which was adapted for the communicative phase hand cannot carry out with equipment in an instant, but the change of the optimal means of communications takes a certain amount of time amount conventionally.

[0008] Furthermore, the manuscript which is reduced to a transmitting result error report and printed in the conventional facsimile apparatus was the 1st (\*\*\*\*\* is cover) page set first. Therefore, in the case of two or more sheet manuscript, it was impossible to have grasped of what kind of content it is a manuscript only with the report output of only 1 page.

[0009] Moreover, as a means to check that the transmitting manuscript has passed the scanner section which reads the manuscript for the check of a transmitting error, the printing means was formed in said scanner section, and it consisted of conventional facsimile apparatus so that the "settled" mark might be printed at the rear face of a transmitting manuscript with this printing means. Therefore, with equipment, the roller for manuscript conveyance of said scanner section etc. might be conventionally soiled in the ink adhering to about [ that a transmitting manuscript becomes dirty ] and a manuscript. And since a manuscript would be conveyed one after another henceforth to the soiled roller for manuscript conveyance, there was also a possibility that even other manuscripts might become dirty. Moreover, the problem that it could not be checked whether the storage section in equipment has memorized, either also had the image information of a transmitting manuscript.

[0010]

[Problem(s) to be Solved by the Invention] Then, this invention is made in view of the trouble of the above conventional techniques, the optimal transmission speed for the other party's equipment is set up at the time of transmission, and it aims at offering the communication controller which can avoid a transmitting error.

[0011] Moreover, irrespective of the transmission speed at the time of transmission of other party equipment, this invention enables setting out of the transmission speed at the time of the reception which can receive good, and aims at offering the communication controller which can avoid a reception error.

[0012] Moreover, even if this invention is in the condition that the external telephone which has an automatic-answering function was connected, when it is judged that the other party's transmitter is facsimile, it aims at offering the facsimile apparatus which can carry out facsimile reception in the good condition.

[0013] Moreover, this invention aims at reducing the image information of a two or more pages manuscript to the size for 1 page, and offering the facsimile apparatus which can carry out a report output, when there is a two or more pages transmitting manuscript.

[0014] Moreover, this invention aims at offering the facsimile apparatus which can perform the reading check of a transmitting manuscript for checking a transmitting error, without soiling the space of a manuscript.

[0015]

[Means for Solving the Problem] In order to attain the above-mentioned object, the communication controller and

facsimile apparatus by this invention are equipped with the following descriptions.

[0016] In the communication controller which will be redialed in order to resend an error page if the disconnection which makes a transmitting error to a cause produces invention according to claim 1 It has a means to analyze the cause of a transmitting error, and a means to set up the transmission speed at the time of transmission. When a means to analyze the cause of said transmitting error judges that the cause of a transmitting error is in transmission speed, a means to set up the transmission speed at the time of said transmission is characterized by setting the transmission speed at the time of resending below to the transmission speed at the time of error generating.

[0017] A means by which invention according to claim 5 detects transmitting agency information, and a means to analyze the cause of a reception error, A means to set up the transmission speed at the time of reception, and a means to analyze the cause of said reception error It has a means to associate and memorize the receiving error code at that time, and a phase hand's transmitting agency information when it is judged that the cause of a reception error is in the transmission speed at the time of reception. A means to set the transmission speed at the time of said reception to information reception from the behind same phase hand is characterized by setting the transmission speed at the time of reception below to the transmission speed at the time of error generating.

[0018] A means for invention according to claim 8 to be the facsimile apparatus to which the external telephone which has the function which detects an automatic-answering function and Caller ID was connected, and to detect Caller ID, It has a means by which a phase hand's transmitter kind can be judged by detected Caller ID. When a means to detect said Caller ID detects a phase hand's Caller ID after said external telephone carried out the primary response, When a means by which a phase hand's transmitter kind can be judged by said detected Caller ID judges that a phase hand's transmitter kind is facsimile, it is characterized by changing CML (Connect Modem to Line) and carrying out facsimile reception.

[0019] In the facsimile apparatus which can carry out the report output of the transmitting result information, invention according to claim 12 is characterized by reducing the image information of a two or more pages manuscript to the size for 1 page, and carrying out a report output, when a transmitting manuscript continues for two or more pages.

[0020] The control unit to which invention according to claim 15 performs input of the telephone number of the phase hand at the time of transmission, mode setting of a transmitting image, etc., The conveyance scanner section read while conveying a transmitting manuscript, and the storage section which memorizes the image information of a manuscript, It has the modem and the communications control section which \*\*\*\*\*, transmit and receive the image information of a manuscript, and the print section which outputs the image data memorized by said storage section. With the output from said print section While checking that the transmitting manuscript has passed said conveyance scanner section, it is characterized by checking what the image information of a manuscript was memorized for by said storage section.

[0021]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained to a detail with reference to a drawing.

[0022] Gestalt 1 drawing 1 (a) of operation is a block diagram for explaining the 1st communication mode of facsimile apparatus equipped with the CCE by the gestalt 1 of operation. This drawing (b) is drawing for explaining the conventional method.

[0023] Moreover, drawing 2 (a) is a block diagram for explaining the 2nd communication mode of the facsimile apparatus by the gestalt 1 of operation. This drawing (b) is drawing for explaining the conventional method.

[0024] As shown in drawing 1 (b), if a circuit is cut by transmitting error generating, by the conventional facsimile, the redial of the error page of the manuscript which the transmitting error generated will be performed. And although it is based on the condition of a circuit even if it is the case where a transmitting error occurs even if when transmission speed is too early, it transmits at the time of error generating, and this rate in many cases, without changing transmission speed. Therefore, a transmitting error will occur again.

[0025] On the other hand, in the facsimile apparatus of the gestalt 1 of operation, it has a means to analyze the cause of a transmitting error, and a means to set up the transmission speed at the time of transmission. Therefore, although the redial of the error page of the manuscript which produced the transmitting error will be performed like the conventional method when a circuit is cut by transmitting error generating as shown in drawing 1 (a) When it is judged with a means to analyze the cause of a transmitting error that the cause of a transmitting error is in transmission speed, the transmission speed at the time of resending can be set below to the transmission speed at the time of error generating with a means to set up the transmission speed at the time of transmission.

[0026] Moreover, as shown in drawing 2 (b), by the facsimile of the conventional method, in case it is going to transmit to the phase hand who produced the communication link error which considers transmission speed as a cause before later, it will transmit with the usual transmission speed, and a transmitting error will be produced again. However, the facsimile apparatus of the gestalt 1 of operation is equipped with a means to associate and memorize the cause of a transmitting error, and the phase hand information which the transmitting error generated. And when transmitting to the phase hand whom the before transmitting [ transmission speed ]-in cause error based on this information as shown in drawing 2 (a) generated, it can transmit below with the transmission speed at the time of transmitting error generating, and generating of a transmitting error can be avoided.

[0027] In addition, two or more rates and modulation techniques can be set up now, and a means to set up said transmission speed can set up a phase hand's optimal transmission speed and optimal modulation technique for a

model.

[0028] Drawing 3 is a flow chart for explaining actuation of facsimile apparatus equipped with the CCE of the gestalt 1 of operation. Hereafter, based on this drawing, actuation of the facsimile apparatus of the gestalt 1 of operation is explained to a detail.

[0029] In the facsimile apparatus of the gestalt 1 of operation, generating of a transmitting error performs the redial of the error page of a transmitting manuscript first (step ST 11). Next, the cause of a transmitting error is analyzed (step ST 12). And it is judged whether it is what the cause of a transmitting error depends on the transmission speed corresponding to V.34 (step ST 13).

[0030] When the cause of a transmitting error is not what is depended on the transmission speed corresponding to V.34, transmitting processing is continued as it is. When a transmitting error considers transmission speed corresponding to V.34 as a cause, it is ANSam from a phase hand. It ignores, and it drops on the transmission speed corresponding to V.17, and retransmits a message (step ST 14).

[0031] By passing through the above procedures, a phase hand's optimal transmission speed and optimal modulation technique for a model can be set up, and good facsimile transmission is attained. Moreover, when the cause of generating of a transmitting error is based on transmission speed at a step ST 13, in case a manuscript is behind transmitted to the same phase hand by associating and memorizing the cause of generating of an error, and the phase hand information at this time, before generating of a transmitting error arises, a phase hand's optimal transmission speed and optimal modulation technique for a model can be set up automatically, and good facsimile transmission is attained.

[0032] Gestalt 2 drawing 4 (a) of operation is a block diagram for explaining the communication mode of facsimile apparatus equipped with the CCE by the gestalt 2 of operation. This drawing (b) is drawing for explaining the conventional method.

[0033] Although reception will be resumed by the conventional facsimile from the place where the reception error occurred if a circuit is cut by generating of a reception error as shown in drawing 4 (b), reception is resumed at the time of error generating, and this rate in many cases, without changing transmission speed, even if it is the case where it is generated in a reception error even if when the transmission speed at the time of reception is too early. Therefore, a reception error occurs again and nonconformity is not solved.

[0034] On the other hand, when it judges that the cause of a reception error of a means detect Caller ID, a means analyze the cause of a reception error, a means set up the transmission speed at the time of reception, and a means analyze the cause of said reception error is in the transmission speed at the time of reception in facsimile apparatus equipped with the communication controller of the gestalt 2 of operation, it has a means relate and memorize the receiving error code at that time, and a phase hand's Caller ID. Therefore, although reception will be resumed like the conventional method from the place where the reception error occurred when a circuit is cut by reception error generating as shown in drawing 4 (a) Then, facsimile reception from the same phase hand is performed by setting below to the transmission speed at the time of error generating, when it is judged that the previous cause of a reception error is in transmission speed by detecting Caller ID. Therefore, it is avoidable that a reception error occurs again.

[0035] In addition, the capacity information on two or more rates and a modulation technique can be set up now, and a means to set up said transmission speed can set up the optimal transmission speed and the optimal modulation technique for a model of a receiving side.

[0036] Drawing 5 is a flow chart for explaining actuation of facsimile apparatus equipped with the CCE of the gestalt 2 of operation.

[0037] Hereafter, based on this drawing, actuation of the facsimile apparatus of the gestalt 2 of operation is explained to a detail.

[0038] It is Caller ID if there is arrival of the mail first in the facsimile apparatus of the gestalt 2 of operation. It detects (step ST 21). This equipment is a receiving error code at that time, and a phase hand's Caller ID, when the reception error which considers transmission speed as a cause in the past occurs. It has related and memorized. Then, Caller ID detected at a step ST 21 It judges whether you are the phase hand who caused the reception error in the past on the radical (step ST 22).

[0039] If it is the phase hand who had not caused a reception error in the past, it will go into reception as it is. If it is the phase hand who caused the reception error in the past, it will judge whether the cause of a reception error is the transmission speed corresponding to V.34 (step ST 23). When the cause of a reception error is not the transmission speed corresponding to V.34, it goes into reception as it is after this. When a reception error considers transmission speed corresponding to V.34 as a cause, ANSam is not sent to a phase hand, but it drops on the transmission speed corresponding to V.17, and goes into reception (step ST 24).

[0040] By passing through the above procedures, the optimal transmission speed and the optimal modulation technique (here V34→ V17) for a model of a receiving side can be set up, and good facsimile reception is attained. Moreover, Caller ID In case facsimile reception from the same phase hand is behind performed by using, and associating and memorizing the cause of a reception error, and the phase hand information that the reception error was generated, before generating of a reception error arises, the optimal transmission speed and the optimal modulation technique for a model of a receiving side can be set up automatically, and good facsimile reception is attained.

[0041] Gestalt 3 drawing 6 of operation is the conceptual diagram showing the example of connection of the facsimile apparatus concerning the gestalt 3 of operation.

[0042] The external telephone 2 which has the function which detects an automatic-answering function (answering machine function) and Caller ID is connected to this facsimile apparatus (the compound machine equipped with the facsimile function by a diagram is shown) 1. And facsimile apparatus 1 is connected with the other party's facsimile apparatus 4 through the station exchange 3. Facsimile apparatus 1 is equipped with a means to memorize the model information corresponding to Caller ID of a phase hand loom, and it, and a means by which a phase hand-loom kind can be judged by Caller ID which received.

[0043] In the facsimile apparatus of the gestalt 3 of operation, after an external telephone will carry out a primary response (step ST 31) if there is arrival of the mail as the model information corresponding to Caller ID by the side of call origination is beforehand inputted by the user, it memorizes and it is shown in drawing 7, Caller ID of a phase hand loom is detected (step ST 32), and it judges and carries out whether a phase hand loom is facsimile (step ST 33). Here, when it is judged that a phase hand loom is facsimile, CML (Connect Modem to Line) is changed to facsimile (step ST 34), and facsimile reception is started. It is CML when it is judged on the other hand that a phase hand loom is not facsimile. It is received by external telephone, without performing a change (step ST 35).

[0044] Since the facsimile apparatus of the gestalt 3 of operation is equipped with a means to memorize the model information corresponding to Caller ID of a phase hand loom, and it, it performs processing (processing from a step ST 31 to a step ST 35) which judges a phase hand-loom kind by Caller ID which received in an instant, and enables normal facsimile reception.

[0045] Actuation of the facsimile apparatus hereafter applied to the gestalt 3 of operation using the sequence diagram shown in drawing 8 is explained.

[0046] First, if there is a primary call from the exchange, the external telephone 2 will carry out a primary response. Caller ID from the exchange is detected next. When it is judged by this Caller ID that a phase hand loom is facsimile, at the time of the secondary call from the following exchange, facsimile is answered with a change and facsimile apparatus 1 in CML, and facsimile reception is started.

[0047] Gestalt 4 drawing 9 (a) of operation is drawing showing the example of an output of the transmitting error report by the facsimile apparatus of the gestalt 4 of operation. This drawing (b) is drawing showing the example of an output of the transmitting error report by the conventional facsimile apparatus.

[0048] As shown in drawing 9 (b), when the transmitting error of a manuscript occurred, in the conventional facsimile apparatus, the manuscript which is reduced to a transmitting error report and printed was the 1st page set first. Therefore, it was impossible to have grasped what kind of content it is only with the report output of the 1st page.

[0049] On the other hand, with error information, with the method of for example, N in 1 grade, the image information of a two or more pages manuscript is reduced to the size for 1 page, and the facsimile apparatus of the gestalt 4 of operation carries out a report output, as shown in drawing 9 (a).

[0050] Drawing 10 is a flow chart for explaining actuation of the facsimile apparatus of the gestalt 4 of operation. Hereafter, based on this drawing, actuation of the facsimile apparatus of the gestalt 4 of operation is explained to a detail.

[0051] In the facsimile apparatus of the gestalt 4 of operation, generating of a transmitting error checks first the number of pages of the manuscript which the transmitting error generated (step ST 41). Next, when the manuscript at that time is two or more pages, in accordance with the manuscript of N page which generated the transmitting error, it reduces to the size for 1 page (step ST 42 (Nin1)). Subsequently, in order to secure the tooth space for carrying error information, the image information for 1 page formed at a step ST 42 is reduced further (step ST 43). And error information and the image information of the error manuscript reduced at a step ST 43 are summarized to 1 page (step ST 44), and an error report is outputted.

[0052] As mentioned above, according to the facsimile apparatus of the gestalt 4 of operation, it becomes easy to check the content of all the manuscripts that have transmitted no pages of the manuscript which generated the transmitting error since the output was possible as a 1-page error report. Moreover, it has the effectiveness that the printed output number of sheets of a transmitted manuscript is reducible with such Nin1 function.

[0053] Moreover, the facsimile apparatus of the gestalt 4 of operation is equipped with a means to carry out scaling of the image information of the read manuscript, and to memorize it, and the means which carries out synthetic division of the image information of the memorized manuscript. Therefore, it is also possible to carry out scaling of the image information of the read manuscript to various gestalten, and to carry out synthetic division of them, and to carry in a report. Moreover, it also becomes possible by applying these techniques to carry out scaling of the transmitting manuscript, and to carry out synthetic division of them, and to send to a phase hand.

[0054] Gestalt 5 drawing 11 of operation is the block diagram showing the configuration of the facsimile apparatus of the gestalt 5 of operation. The control unit to which the facsimile apparatus of the gestalt 5 of operation performs input of the telephone number of the phase hand at the time of transmission, mode setting of a transmitting image, etc. (un-illustrating). The conveyance scanner section 11 read while conveying a transmitting manuscript, and the image storage section 12 which memorizes the image information read in the conveyance scanner section 11, The scaling section 13 which performs scaling processing of the image information memorized in the image storage section 12, The smoothing section 14 which performs resolution conversion of the image information to which scaling processing was performed in the scaling section 13, The reference image information storage section 15 which consists of a FIFO memory which memorizes temporarily the image information memorized by the image storage section 12 on the occasion of the smoothing processing by the smoothing section 14 for reference, The image information storage section 16 after smoothing which memorizes the image information after the smoothing

processing by the smoothing section 14, It has NCU (Network Communication Unit)17 which performs connection control of the call origination for connecting with a circuit switch, dial signal sending out, etc., and the print section 18 which prints the image data memorized by the image storage section 12. Moreover, the image storage section 12 is equipped with the function added to the image information which had the information on a user request memorized, and can output it from the print section 18 with image information. This actuation is performed by the input to said control unit.

[0055] Although the image information read in the conveyance scanner section 11 is once memorized by the image storage section 12 in the facsimile apparatus of the gestalt 5 of the operation constituted as mentioned above, the check of the transmitting manuscript's having passed the scanner section 12 certainly and image information having been memorized by the image storage section 12 can be performed by carrying out the printed output of the image information memorized there by the print section 18.

[0056] Therefore, since the printing means for sealing the transmitting manuscript which passed the scanner section in the check mark like equipment before becomes unnecessary, a manufacturing cost can be reduced. Moreover, the dirt of the transmitting manuscript which considers the check mark attached with said printing means as a cause does not arise.

[0057] Furthermore, in the facsimile apparatus of the gestalt 5 of operation, the image information memorized by the image storage section 12 can be reduced to the size of arbitration in the form of for example, N in 1 grade, and the printed output of the information on a user request, such as transmitting time, can also be added and carried out to this.

[0058]

[Effect of the Invention] As mentioned above, according to invention according to claim 1, the other party's optimal transmission speed and optimal modulation technique for equipment are set up at the time of transmission of a manuscript, and the communication controller which can avoid a transmitting error can be offered.

[0059] According to invention according to claim 5, irrespective of the transmission speed and the modulation technique at the time of transmission of other party equipment, transmission speed at the time of the reception which can receive good, and setting out of a modulation technique can be enabled, and the communication controller which can avoid a reception error can be offered.

[0060] Even if it is in the condition that the external telephone which has an automatic-answering function was connected, when it is judged according to invention according to claim 8 that a phase hand's transmitter is facsimile, the facsimile apparatus which can carry out facsimile reception in the good condition can be offered.

[0061] According to invention according to claim 12, even when an error occurs over two or more pages of a transmitting manuscript, the image information of a two or more pages transmitting manuscript can be reduced to the size for 1 page, and the facsimile apparatus which can carry out a report output can be offered.

[0062] According to invention according to claim 15, the facsimile apparatus which can perform the reading check of a transmitting manuscript for checking a transmitting error, without soiling the space of a manuscript can be offered.



## DESCRIPTION OF DRAWINGS

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### [Brief Description of the Drawings]

[Drawing 1] (a) is a block diagram for explaining the 1st communication mode of facsimile apparatus equipped with the CCE by the gestalt 1 of operation. (b) is drawing for explaining the conventional method.

[Drawing 2] (a) is a block diagram for explaining the 2nd communication mode of facsimile apparatus equipped with the CCE by the gestalt 1 of operation. (b) is drawing for explaining the conventional method.

[Drawing 3] It is a flow chart for explaining actuation of facsimile apparatus equipped with the CCE of the gestalt 1 of operation.

[Drawing 4] (a) is a block diagram for explaining the communication mode of facsimile apparatus equipped with the CCE by the gestalt 2 of operation. (b) is drawing for explaining the conventional method.

[Drawing 5] It is a flow chart for explaining actuation of facsimile apparatus equipped with the CCE of the gestalt 2 of operation.

[Drawing 6] It is the conceptual diagram showing the example of connection of the facsimile apparatus concerning the gestalt 3 of operation.

[Drawing 7] It is a flow chart for explaining actuation of the facsimile apparatus of the gestalt 3 of operation.

[Drawing 8] It is a sequence diagram for explaining actuation of the facsimile apparatus of the gestalt 3 of operation.

[Drawing 9] (a) is drawing showing the example of an output of the transmitting error report by the facsimile apparatus of the gestalt 4 of operation. (b) is drawing showing the example of an output of the transmitting error report by the conventional facsimile apparatus.

[Drawing 10] It is a flow chart for explaining actuation of the facsimile apparatus of the gestalt 4 of operation.

[Drawing 11] It is the block diagram showing the configuration of the facsimile apparatus of the gestalt 5 of operation.

### [Description of Notations]

1 Four Facsimile apparatus

2 External Telephone

3 Station Exchange

11 Conveyance Scanner Section

12 Image Storage Section

13 Scaling Section

14 Smoothing Section

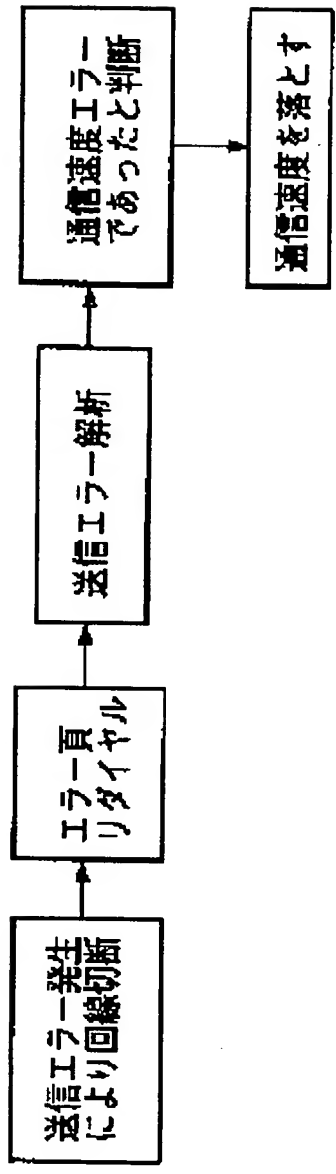
15 Reference Image Information Storage Section

16 After [ Smoothing ] Image Information Storage Section

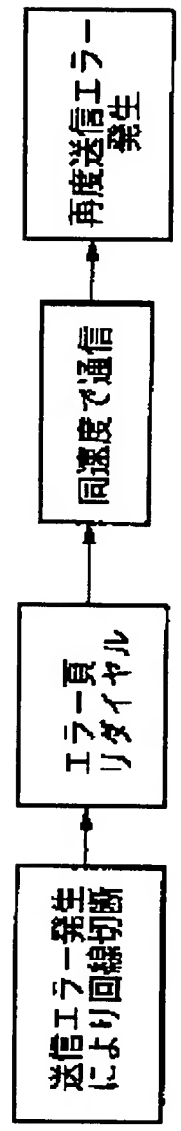
17 NCU

18 Print Section

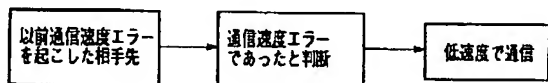
(a)



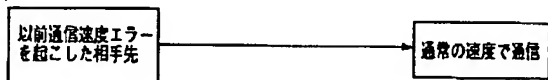
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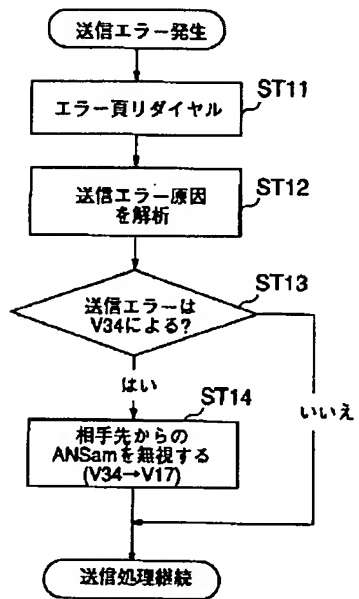
(a)



(b)

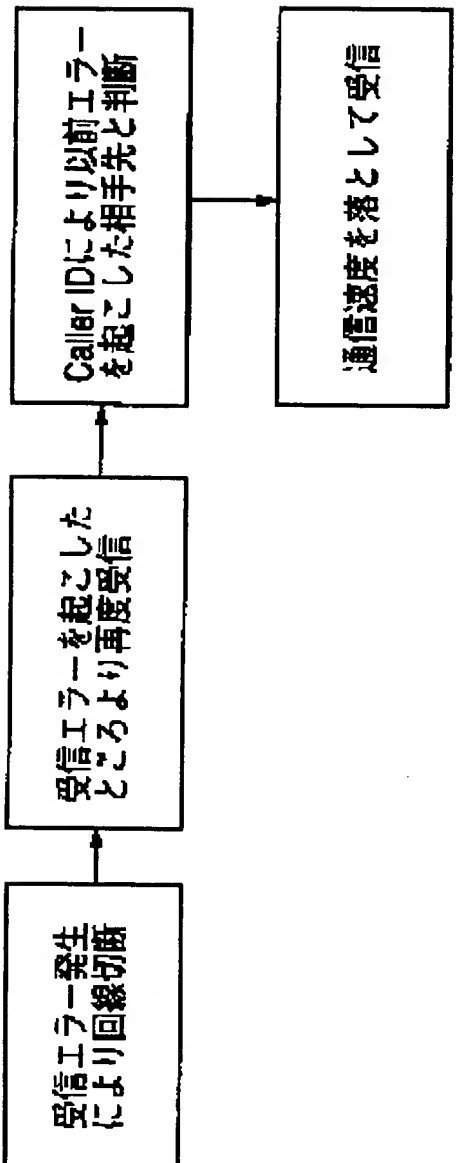


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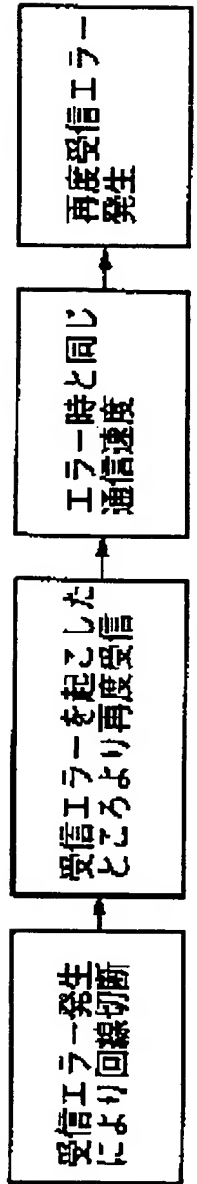


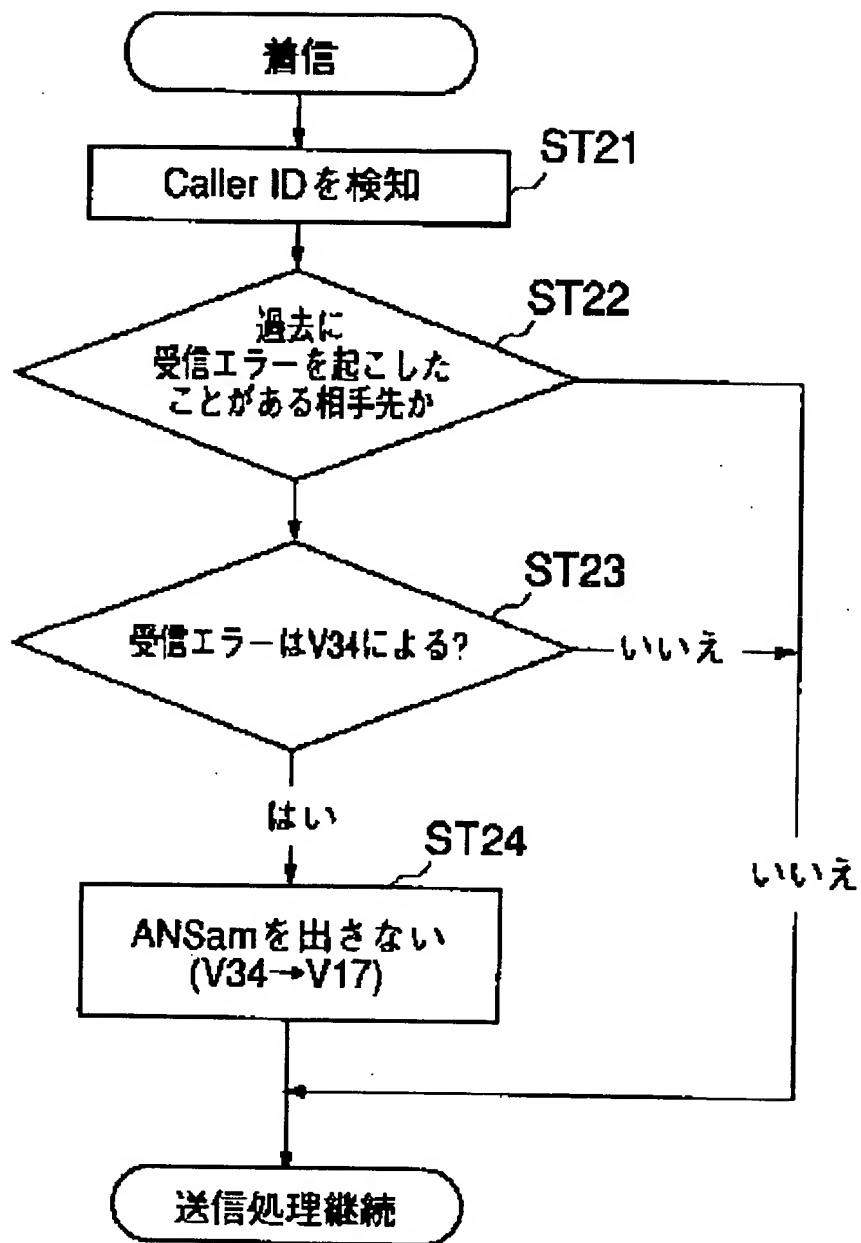
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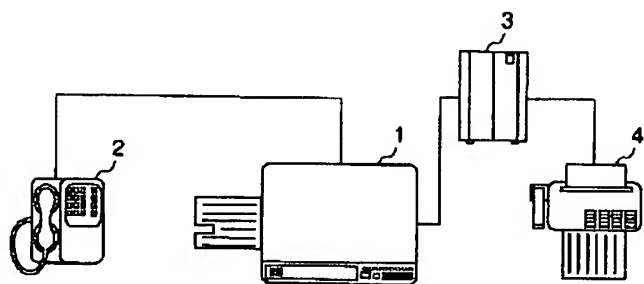
(a)



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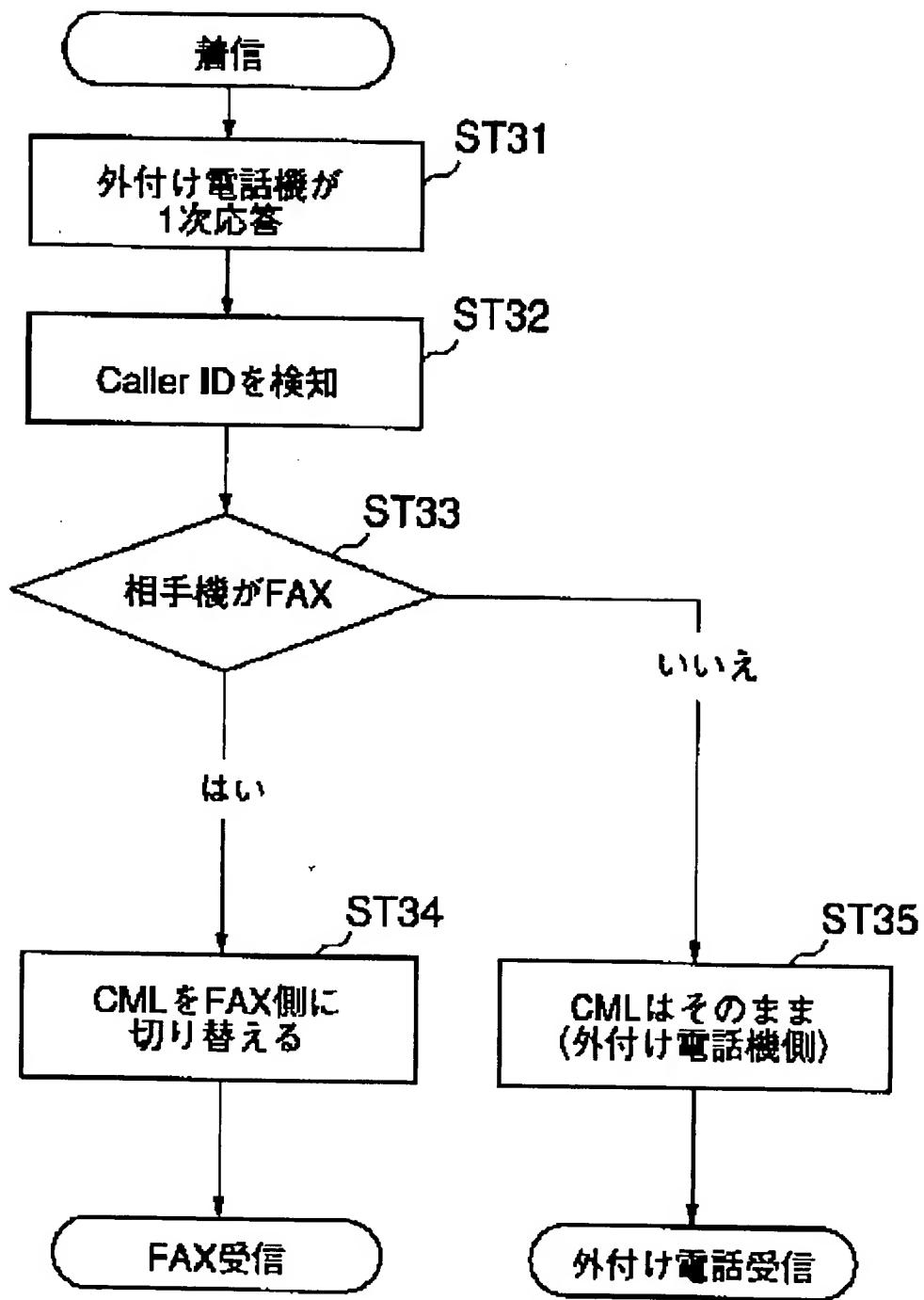




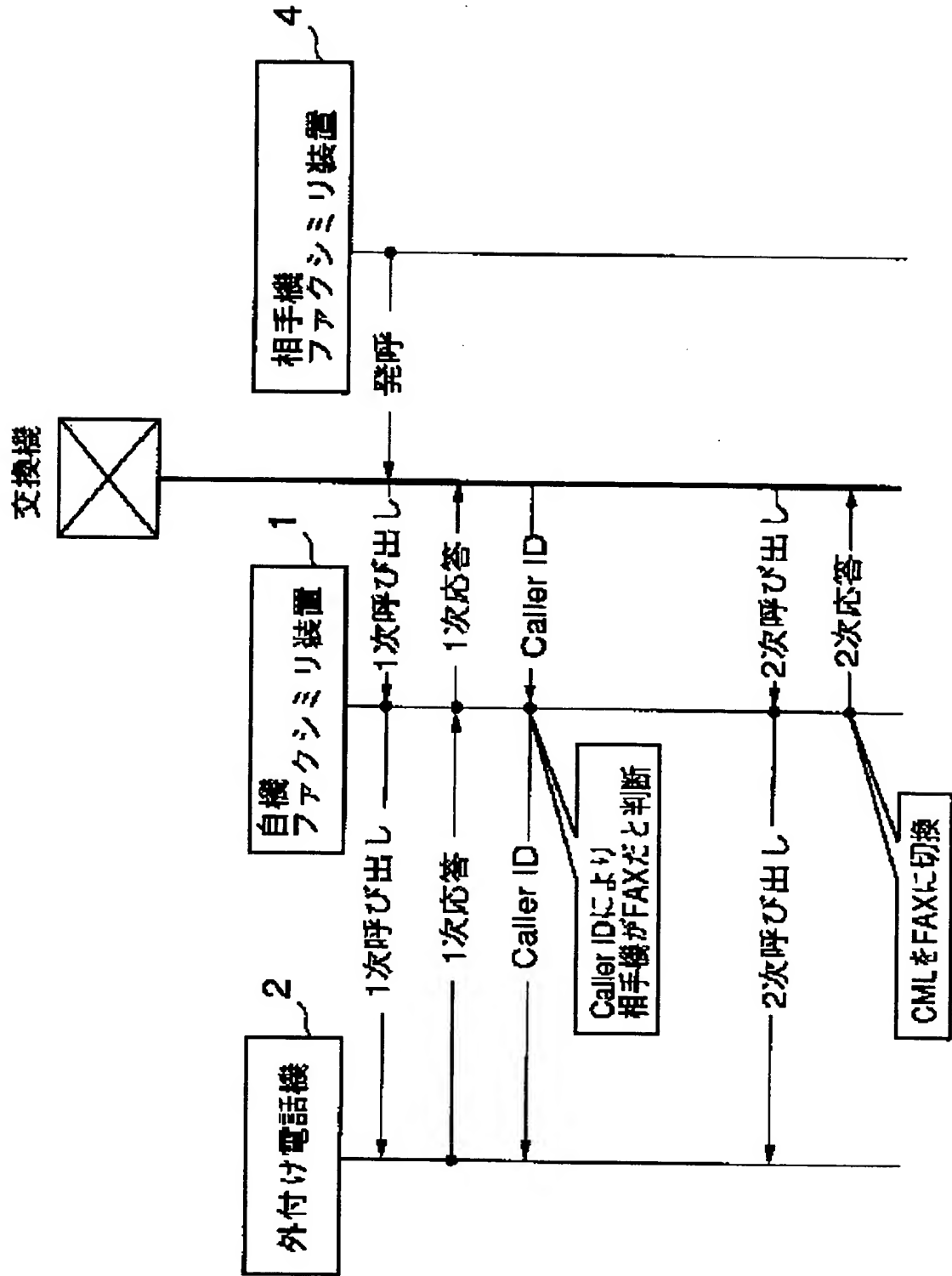


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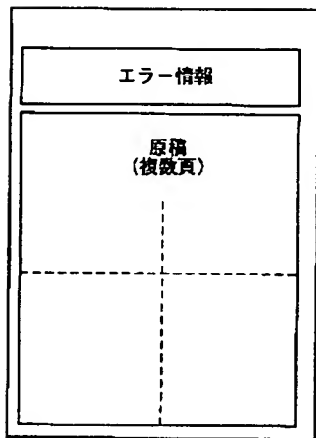
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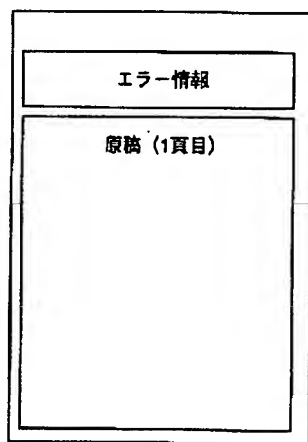




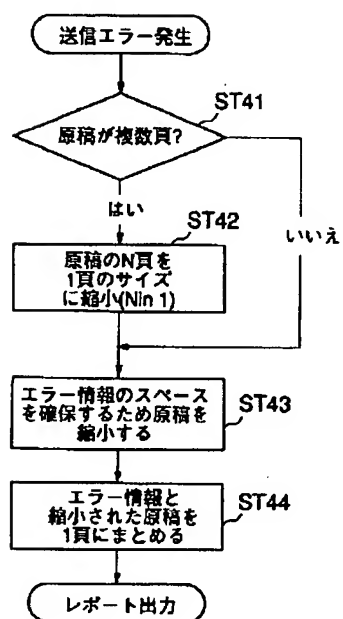
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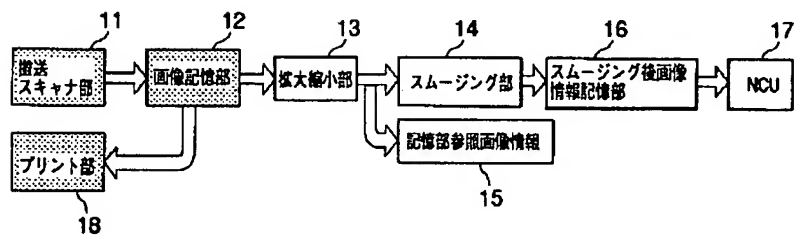
(b)



[Translation done.]



[Translation done.]



[Translation done.]

# CORRECTION OR AMENDMENT

[Kind of official gazette] Printing of amendment by the convention of 2 of Article 17 of Patent Law

[Category partition] The 3rd partition of the 7th category

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[Publication No.] JP,2001-268158,A (P2001-268158A)

[Date of Publication] September 28, Heisei 13 (2001. 9.28)

[Application number] Application for patent 2000-80155 (P2000-80155)

[The 7th edition of International Patent Classification]

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H04L 1/00  
H04L 12/50  
H04M 11/00  
H04N 1/00  
H04N 1/32  
H04N 1/387

[FI]

H04L 13/00 307 C  
H04L 1/00 E  
H04M 11/00 303  
H04N 1/00 106 A  
H04N 1/32 J  
H04N 1/387  
H04L 11/20 103 A

[Procedure amendment]

[Filing Date] July 26, Heisei 16 (2004. 7.26)

[Procedure amendment 1]

[Document to be Amended] Description

[Item(s) to be Amended] Whole sentence

[Method of Amendment] Modification

[The content of amendment]

[Document Name] Description

[Title of the Invention] Facsimile apparatus

[Claim(s)]

[Claim 1]

An automatic-answering function and Caller It is the facsimile apparatus to which the external telephone which has the function which detects ID was connected, and is Caller. A means to detect ID, Detected Caller ID It has a means by which a phase hand's transmitter kind can be judged. It is said Caller after said external telephone carries out a primary response. A means to detect ID A phase hand's Caller When ID is detected, it is said detected Caller. ID A means by which a phase hand's transmitter kind can be judged Facsimile apparatus characterized by changing CML (Connect Modem to Line) and carrying out facsimile reception when it is judged that a phase hand's transmitter kind is facsimile.

[Claim 2]

Caller Facsimile apparatus according to claim 1 characterized by having a means to memorize the information on the transmitter kind corresponding to ID and it.

[Claim 3]

Caller It is Caller about the information on ID and the corresponding transmitter kind. It is the facsimile apparatus according to claim 2 characterized by having a means to set up for every ID and performing decision of a model based on the setting-out information.

[Claim 4]

It is [ a means to detect CNG at the time of reception, and ] Caller about the detection result. It is the facsimile apparatus according to claim 2 characterized by having a means to memorize corresponding to ID and making a judgment of a model based on the existence of said CNG detection.

[Detailed Description of the Invention]

[0001]

[Field of the Invention]

This invention relates to facsimile apparatus.

[0002]

[Description of the Prior Art]

Conventionally, in the facsimile apparatus to which the external telephone which has an automatic-answering

function was connected, even when the communication link from the other party is facsimile transmission, it receives by external telephone previously and normal facsimile reception cannot be performed. On the other hand, also when the communication link from a phase hand was a telephone, FAKURIMIRI might answer.

[0003]

Thus, it was what the change of the telephone/facsimile which was adapted for the communicative phase hand cannot carry out with equipment in an instant, but the change of the optimal means of communications takes a certain amount of time amount conventionally.

[0004]

[Problem(s) to be Solved by the Invention]

Even if this invention is in the condition that the external telephone which has an automatic-answering function was connected, when it is judged that the other party's transmitter is facsimile, it aims at offering the facsimile apparatus which can carry out facsimile reception in the good condition.

[0005]

[Means for Solving the Problem]

In order to attain the above-mentioned object, the facsimile apparatus by this invention is equipped with the following descriptions.

[0006]

This invention is an automatic-answering function and Caller. It is the facsimile apparatus to which the external telephone which has the function which detects ID was connected, and is Caller. A means to detect ID, Detected Caller It has a means by which a phase hand's transmitter kind can be judged by ID. It is said Caller after said external telephone carries out a primary response. A means to detect ID is a phase hand's Caller. When ID is detected, Said detected Caller When a means by which a phase hand's transmitter kind can be judged by ID judges that a phase hand's transmitter kind is facsimile, it is characterized by changing CML (Connect Modem to Line) and carrying out facsimile reception.

[0007]

[Embodiment of the Invention]

Hereafter, the gestalt of operation of this invention is explained to a detail with reference to a drawing.

[0008]

The gestalt of operation

Drawing 6 is the conceptual diagram showing the example of connection of the facsimile apparatus concerning the gestalt of operation.

[0009]

In this facsimile apparatus (the compound machine equipped with the facsimile function by a diagram is shown) 1, they are an automatic-answering function (answering machine function) and Caller. The external telephone 2 which has the function which detects ID is connected. And facsimile apparatus 1 is connected with the other party's facsimile apparatus 4 through the station exchange 3. Facsimile apparatus 1 is Caller of a phase hand loom. A means to memorize the model information corresponding to ID and it, and Caller which received It has a means by which a phase hand-loom kind can be judged by ID.

[0010]

the facsimile apparatus of the gestalt of operation — beforehand — a user — Caller by the side of call origination after an external telephone will carry out a primary response (step ST 31) if there is arrival of the mail as the model information corresponding to ID is inputted and memorized and it is shown in drawing 7 — Caller of a phase hand loom ID is detected (step ST 32) and it judges whether a phase hand loom is facsimile — it carries out (step ST 33). Here, when it is judged that a phase hand loom is facsimile, CML (Connect Modem to Line) is changed to facsimile (step ST 34), and facsimile reception is started. It is CML when it is judged on the other hand that a phase hand loom is not facsimile. It is received by external telephone, without performing a change (step ST 35).

[0011]

The facsimile apparatus of the gestalt of operation is Caller of a phase hand loom. Caller which received since it had a means to memorize the model information corresponding to ID and it Processing (processing from a step ST 31 to a step ST 35) which judges a phase hand-loom kind by ID is performed in an instant, and normal facsimile reception is enabled.

[0012]

Actuation of the facsimile apparatus hereafter applied to the gestalt of operation using the sequence diagram shown in drawing 8 is explained.

[0013]

First, if there is a primary call from the exchange, the external telephone 2 will carry out a primary response. Caller ID from the exchange is detected next. When it is judged by this Caller ID that a phase hand loom is facsimile, at the time of the secondary call from the following exchange, facsimile is answered with a change and facsimile apparatus 1 in CML, and facsimile reception is started.

[0014]

[Effect of the Invention]

Even if it is in the condition that the external telephone which has an automatic-answering function was connected, when it is judged according to this invention that a phase hand's transmitter is facsimile, the facsimile apparatus which can carry out facsimile reception in the good condition can be offered.

[Brief Description of the Drawings]

[Drawing 1] It is the conceptual diagram showing the example of connection of the facsimile apparatus concerning the gestalt of operation.

[Drawing 2] It is a flow chart for explaining actuation of the facsimile apparatus of the gestalt of operation.

[Drawing 3] It is a sequence diagram for explaining actuation of the facsimile apparatus of the gestalt of operation.

[Description of Notations]

1 Four Facsimile apparatus

2 External Telephone

3 Station Exchange

11 Conveyance Scanner Section

12 Image Storage Section

13 Scaling Section

14 Smoothing Section

15 Reference Image Information Storage Section

16 After [ Smoothing ] Image Information Storage Section

17 NCU

18 Print Section

[Procedure amendment 2]

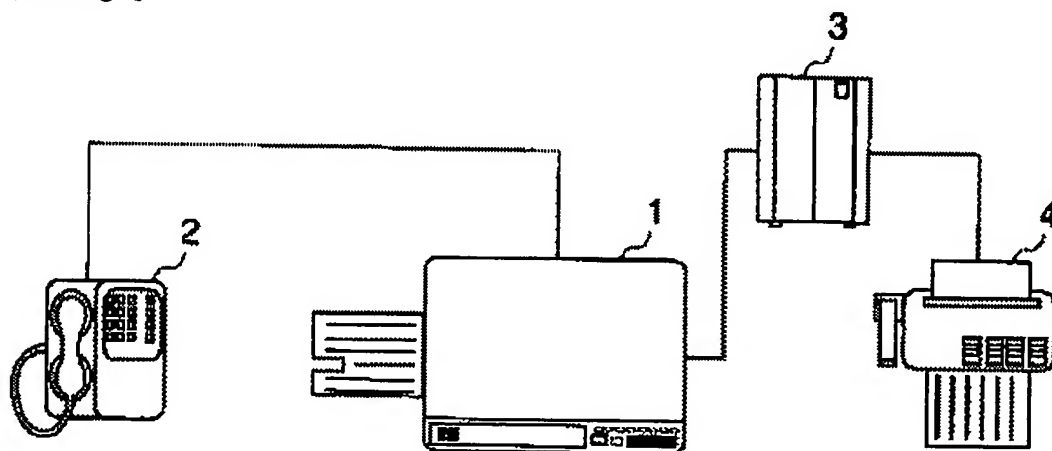
[Document to be Amended] DRAWINGS

[Item(s) to be Amended] Complete diagram

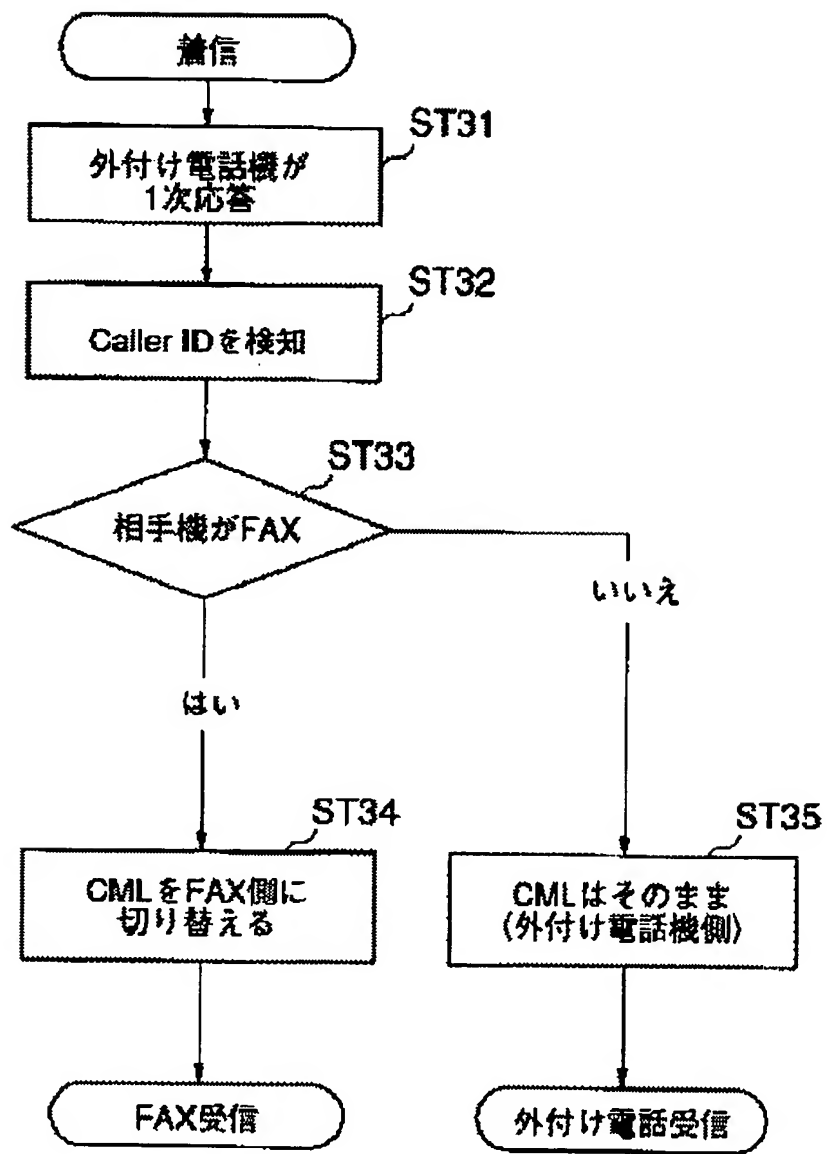
[Method of Amendment] Modification

[The content of amendment]

[Drawing 1]



[Drawing 2]



[Drawing 3]



